Clarifying Airline Rights in Maintenance
IATA MCC meeting September 10th 2014
HEICO Corporation is a rapidly growing aerospace and electronics company focused on niche markets and cost-saving solutions for our customers.

Our products are found in the most demanding applications requiring high-reliability parts and components, such as aircraft, spacecraft, defense equipment, medical equipment, and telecommunications systems.

- Founded in 1957, over 55 years in business
- NYSE listed (HEI, HEI.A)
- Annual net sales of $1b
- Over 4,100 Team Members in 43 facilities in the United States (16 states), Canada, Europe, the Middle East, and Asia
- Forbes Best Small Companies:
  - Seventh year in the top 200, with three years of inclusion in the top 100
  - Ranked second out of the five companies listed in the Forbes Aerospace & Defense and Airline Industry categories of 2013
- Forbes World’s Most Innovative Growth Companies of 2014
HEICO Repair Group is the largest independent component MRO and Asset Management services provider in the world. Our success is a result of our teams’ ability to fully understand our customers’ requirements, delivering the optimal solution for their needs.

HEICO Repair Group is recognized globally as a premier provider of component MRO services to the aerospace market.

- Holding over 14,000 PMAs for:
  - Nearly every aircraft and engine platform
  - Every area of aircraft and engine
- Producing more than 500 new, highly engineered parts each year.
  - PMA Management
  - PMA Kitting
  - In-house Manufacturing
- Research & Development

- Broad Scope of Component MRO Capability: 26,000+
- Technical Competence & Support: 30+ Engineers
- Advanced Solutions: Over 400 FAA-DER repairs developed every year
- Advanced Technical Library
- Cutting-edge Equipment to Re-Engineer, Design and Test In-house
Engine OEM’s continue to gain Market Share

ROLE OF OEM IN MRO

OEM engine overhaul market shares will continue to increase over the next decade

Engine OEM Estimated Market Share

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<th>2013</th>
<th>2023</th>
<th>2033</th>
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<tr>
<td>OEM</td>
<td>36%</td>
<td>25%</td>
<td>10%</td>
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<tr>
<td>Licensed</td>
<td>16%</td>
<td>18%</td>
<td>20%</td>
</tr>
<tr>
<td>Non-OEM</td>
<td>18%</td>
<td>70%</td>
<td>68%</td>
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<tr>
<td></td>
<td>68%</td>
<td>47%</td>
<td>47%</td>
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<td>69%</td>
<td>12%</td>
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<td>19%</td>
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<td></td>
<td>8%</td>
<td>92%</td>
<td>92%</td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>95%</td>
<td>95%</td>
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Source: ICF SH&E Analysis
OEM consolidation is limiting the airline choice

GLOBAL MRO TRENDS – CHANGING ROLE OF THE OEM

Tier 1 supply chain model continues to evolve as OEMs consolidate their aircraft manufacturing programs...

Component MRO Spending Distribution
B777 versus B787

Supplier Consolidation
Tier I supply chain model; redefined system architectures

Source: ICF SH&E Analysis, Airframer, Teal Group

icfi.com/aviation | Passion. Expertise. Results.
OEMs in the MRO market drive innovation

“OEM” % MRO has grown from 13% to 46% in 15 years

Options to use PMA / DER (DOA) Repairs keep independent MROs competitive.

Without options there is no limit to OEM price.
Various Types of Replacement Parts Options

Part Type
- TC/PC holder
- STC/PC-PMA holder
- PMA holder
- TSOA holder

Design (Approval)
- TC holder
- TSOA holder
- STC holder
- PC holder

Quality System (Approval)
- PC or PMA holder
- PMA holder

Application
- Part for a Product
- Part for an Article
- Part on a Product
- Part on a Product
- Only Owner/Operator fleet

Typical OEM Parts

Typical PMA Parts

O/O Parts
PMA and DER Parts are Found Everywhere

**Fuselage/Interiors**
- In Flight Entertainment
- Lavatories
- Seat Parts
- Tray Tables
- Galleys
- Overhead Bins

**Wing**
- Flight Controls
- Actuation Systems
- Guides

**Cockpit/Avionics**
- INUs, IRUs
- Display Units
- DGAs
- Instruments
- Autopilots

**Components**
- Electro-Mechanical
- Hydraulic Pumps
- ACMs, CSD/IDG
- Batteries
- APU

**Landing Gear**
- Wheels and Brakes
- Landing Gear

**Engines Parts**
- Fuel Pumps
- Nozzles
- Gears
- Shafts

**Engines**
- Combustion Chambers
- Blades & Vanes
- Fan Exit Guide Vanes
- Shrouds (single crystal & equiax)
- Thrust Reversers

**Engines Supported:**
- CFM56
- CF6
- CF34
- PW2000
- PW4000
- V2500
- JT8D
- JT9D
- LM2500/5000/6000

**Expendables**
- Radomes
- Nose Cowl
- Battery Packs
- Cockpit Paper

- Bearings
- Starters
- Rings & Spacers
- Radomes
- Nose Cowl
- Battery Packs
- Cockpit Paper

- Acoustic Panels
- Pneumatic/Bleed/Anti Ice Valves
- Heat Shields
- Insulation Blankets
Recently, some engine manufacturers responded to the FAA’s approval of PMA and STC for parts involving type design engine models by telling customers that support of their products could be limited if such parts are installed...Some TC/PC holders have included language in the FAA-approved airworthiness limitation section (ALS) of their engine instructions for continued airworthiness (ICA) stating that the ICA was developed only for use with their parts.

"PMA and STC parts are thoroughly evaluated for compliance with respect to any changes they introduce and their effect on the original type design. The need for supplemental ICAs, new airworthiness limitations, and other conditions is established by the FAA to ensure the safe integration of the PMA and STC parts into the product."
Continued Operational Safety: Who to call?

“This Special Airworthiness Information Bulletin (SAIB) alerts owners, operators, and certificated repair and maintenance providers of the responsibilities of type and production certificate (TC/PC) holders, supplemental type certificate (STC) holders, and the parts manufacturer approval (PMA) holders to support the continued operational safety (COS) of their product or part design.”

“TC/PC holders, PMA holders, and STC holders are responsible for the COS support in accordance with the applicable standards for their parts and products which they have designed and produced.”

The Design Approval Holder (TC/PC, STC or PMA holder) are responsible for COS for their parts!
“It is not appropriate for a DAH to place limitations on the use of its ICA between the owner/operator and the maintenance provider, whether the maintenance provider is rated or not, to perform that maintenance...”

“...a DAH may not inhibit an owner/operator from distributing ICA to current or potential future maintenance providers. Therefore, it is not acceptable for a DAH to limit the distribution of ICA through restrictive access or use agreements, or by adding restrictive language that would control the use of ICA by an owner/operator with respect to the maintenance of its product.”

**FAA Policy Statement**

**OEMs cannot restrict Owner/Operator’s use of ICA**

CMM’s are ICA
- if they are referenced

DAH may charge a fee for ‘make available’
- But they cannot make it ‘unavailable’ by charging and ‘exorbitant fee’

DAH ‘must furnish’ and ‘make available’ ICA
- Even if they consider it proprietary (as a condition of their certificate)

Source: FAA Legal Interpretation August 9th 2012
Can DAH’s restrict ICA inspections to their own facility?

Portions of the ICAs were not being made available to a ‘person required to comply’ (Properly rated repair station with a need to comply.)

no-the holder of a design approval may not restrict the performance of "mandatory" inspections and repairs to only facilities it specifies.”

FAA Legal Interpretation
OEMs cannot restrict Details of ICA – “Source Approved Repairs”

Source: FAA Legal Interpretation March 31st 2014
ICA Restrictions – FAA is very clear

- DAH (OEM) restrictions are not acceptable.
- FAA has clearly stated policy statement and Legal interpretations.

Owner/Operators (Airlines) should push w/ MRO’s to exercise their rights to get complete sets of ICA.
  - Owner/Operators ‘must furnish’
  - MRO’s ‘make available’

Airlines & MROs should stand up for their rights.

Note: Owner/Operators can ask for a ‘complete set’ (including all referenced CMMs) in hard copy and the TC holder must comply.
Test Software & Tooling and Tech Support

- **Test Software**
  - An argument can be made that the ICA references the test software, and the Instructions (ICA) to test the component before it is returned to service are embedded in the software. Therefore Test software should be treated as ICA.

- **Test Tooling**
  - Counter argument would be that tooling is not instructions but equipment. The FAA/EASA allows for equivalent tooling.

- **Technical Support**
  - Tech support beyond COS could be argued as an additional service. It has been typically been provided as good customer support.

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**Technical Support, Software and Tooling**
Recommend Airlines negotiate this at the time of initial purchase.
ICA: Where the rubber hits the runway!

- HEICO is: a Part 145 Repair Station, a PMA parts provider, parts distributor, and an ‘OEM’ (a license PMA holder)

- As an ‘OEM’ we ‘must furnish’ to Owners and Operators and ‘make available’ to Repair Stations.

- As a PMA parts provider we make our supplemental ICA available on our website.

- As a Repair Station we work with the Owners and Operators to make sure that we have the appropriate ICA.

Airlines and MRO’s need to understand and exercise their rights.

Airlines are ultimately responsible for Maintenance, therefore the need to have access to ALL the data around the maintenance of the aircraft.